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5JSC/Chair/6/Chair follow-up
16 January 2006

To: Joint Steering Committee for Revision of AACR
From: Deirdre Kiorgaard, JSC Chair
Subject: GMD/SMD Working Group: Proposal for Content and Carrier Terms in RDA

Attached is a proposal for content and carrier terms in RDA from the GMD/SMD Working Group. Constituencies are asked to respond by the 27 March 2006.

To: Joint Steering Committee for Revision of AACR

Date: 28 December 2005

From: GMD/SMD Working Group*

Subject: **Content and Carrier Terms in RDA**

Related documents:

GMD/SMD Working Group: Terms of Reference, 5JSC/Chair/6, 2005 June

RDA Prospectus, 2005 July, <http://www.collectionscanada.ca/jsc/rdaprospectus.html>

AACR3, Draft of Part I, 2004 Dec., with constituency responses to sections 10, 12, and 14

GMD Discussion Paper, 4JSC/Chair/73, 2001 May, <http://www.collectionscanada.ca/jsc/docs/gmd.pdf>

Introduction

In its 2005 July prospectus, RDA proposed two new descriptive elements to translate the AACR2 features called General Material Designation (GMD) and Specific Material Designation (SMD) into the structural model of FRBR. The 'type and form of content' element covers many GMDs by providing a place to designate the category of work or expression. This element falls within the Part I 'content description' chapter, which focuses on information that helps end users select "a resource to meet their 'intellectual' requirements." The 'type and form of carrier' element covers the media-based GMDs (e.g., microform) as well as SMDs by providing a place to designate manifestation categories and formats. This element is part of the 'technical description' chapter, but separate from the 'extent' and 'other technical details' elements.

The JSC asked the GMD/SMD Working Group to address several aspects of the content and carrier elements. The first section of our report summarizes the recommendations resulting from e-mail discussions held in late October through December 2005. Subsequent sections consider in more detail the following tasks from the JSC terms of reference.

1. Terms

Using the categories of content (work, expression), medium, and carrier,

- Identify terms to be used to indicate type and form of content. (*See Appendix A*)
- Identify terms to be used to indicate type and form of carrier. (*See Appendix B*)
- Provide a definition for each term. (*See Appendices A and B*)
- Articulate how the terms will be used. (*See Sections 2 and 3*)
- Ensure that all terms are intelligible to catalogue users. (*Section 3*)
- Propose guidelines for when more than one content term or more than one carrier term is applicable to a resource. (*See Section 4*)

2. Display

- Make proposals on how both types of terms could be displayed in an ISBD and an OPAC display. The working group added citation displays. (*See Section 5*)

3. Issues

- Highlight any other relevant issues for consideration by the JSC. (*See Section 6*)

* Report compiled by Ann Chapman, Interoperability Focus Officer, UKOLN; Ebe Kartus, Metadata Coordinator, University of Melbourne; Daniel Paradis, Music Cataloguing Librarian, Université de Montréal; and Helena Zinkham, Prints and Photographs Division, Library of Congress.

1. Summary of Recommendations

- 1.1 **Require one broad content term to designate the type and form of the resource.** Represent both work and expression in a single closed list of terms to support interoperability of records in multiple systems and keep term selection practical. (*For definitions and examples, see Appendix A.*)

cartographic
choreographic
data
mixed
moving image
music notation
music recording
object
software
sound
spoken word
textual
visual

- 1.2 **Convey specific content type information through scope notes; other descriptive notes; and genre, form, and subject access points.**

- 1.3 **Require one broad carrier term to designate the physical characteristics or media category using the following closed list.** (*For definitions, see Appendix B.*)

audio
digital
graphic
manuscript
microform
multimedia
printed
projected
tactile
three-dimensional

- 1.4 **Require one 'specific carrier' type term.** Commonly used terms should be available in RDA, with the option to consult an authority file or thesaurus for additional terms to designate media that have an extensive or evolving vocabulary. Examples include atlas, Braille, DVD audio, JPEG file, poster, and score. (*For additional examples, see Appendix B.*)

- 1.5 **Offer the option to repeat the content and carrier type elements, as needed, to convey information effectively to end users.** (*See Section 4.*)

- 1.6 **Recommend that one broad content and one 'specific carrier' term display to end users** in most circumstances to aid in filtering searches and recognizing resources. All terms could display as a local option. The term display could be through an icon or through a word or phrase that is more meaningful to local users than the underlying controlled vocabulary. Cataloguer and public user displays might differ.

2. Justification for Requiring Content and Carrier Information

The working group concluded that content and carrier information is required to assist end users in identifying and selecting resources suitable to their needs. Current and future online information environments can easily overwhelm users with large quantities of entries about a wide variety of resources. Broad content and carrier terms are valuable tools for finding relevant information quickly and for filtering (narrowing) searches. For example, a visually impaired person might wish to limit searches to audio and tactile media, while a user without access to a PC might wish to exclude digital media. 'Specific carrier' terms present information important for helping users recognize which resources they have the means to work with, e.g., 'VHS video' rather than only 'video.'

End users are increasingly familiar with navigating information systems through categories based on classes of material because commercial online enterprises, such as Amazon, Sears, and Yahoo, now provide this kind of functionality for their products. Commercial sale catalogs often offer brief browsing lists of product categories to guide searches. They may also display one or more category terms with each product 'citation' to help identify the product and to provide links to additional products in the same category. (*For an example with commercial categories, see Appendix C.*)

At least three situations benefit from content and carrier information: search filter, citation display, and full record display. Requiring the use of terms to indicate broad content, 'broad carrier,' and 'specific carrier' categories enables interoperability across databases and catalogues in different sectors and domains as well as flexible options for local navigation and display choices. The type and form designations should be at an appropriate level for users of a catalogue or finding aid: in some cases, broad terms are needed, while others require more specific terms.

2.1 Search Filter

Broad content and broad carrier terms are both helpful as parameters for filtering (limiting or guiding) searches. The presence of content-carrier terms allows online access systems to offer short lists of resources grouped by type of information as an alternative to long lists of resources arranged alphabetically by title or creator. The short lists of categories provide opportunities for end users to pick selections when they are not finding what they want by typing words in a blank search box.

An end user may wish to filter on the basis of content (the user wants a cartographic resource and not a textual resource about a city) or on the basis of content plus carrier (the user wants a music resource but can only use a Braille or audio format).

Which content and carrier elements are required for search filtering should be determined by the agency creating the catalogue or finding aid. Filters may differ between public access and cataloguer systems. Possible situations:

- Anticipated user requires only content filtering
 - Broad content term only
visual
- Anticipated user requires content and carrier filtering
 - Broad content term + Broad carrier term
visual + digital
 - Broad content term + Specific carrier term(s)
visual + photograph

JPEG file

- Broad content term + Broad carrier term + Specific carrier term(s)
visual + digital + photograph
JPEG file
- Anticipated user requires only carrier filtering
 - Broad carrier term only
digital
 - Broad carrier term + Specific carrier term(s)
digital + photograph
JPEG file

2.2 Citation Display

Inclusion of content and carrier information in a citation or brief entry display enables end users to quickly and efficiently assess the relevance of a resource in a potentially long list. End users can then view full records selectively. End users need to be able to assess the relevance of a resource to their search by:

- Differentiating content: ‘Is this the content that I need?’
(the text of a novel, a score for a piece of music, a TV broadcast of a concert)
- Differentiating carrier: ‘Is this a carrier I can use?’
(standard print, large print, tactile text, spoken word)

Possible situations:

- Broad content term + Specific carrier term(s)
 music notation + score
 + large print
- Broad content term + Broad carrier term(s) + Specific carrier term(s)
 cartographic + digital + GIS file

2.3 Full Record Display

Inclusion of content and carrier information in full records enables end users to assess the suitability of a resource in detail. All levels of content and carrier should display in a full record used by catalogers. The carrier element terms may need to be supplemented by information in the extent and other technical description elements.

Possible situations:

- Broad content term + Specific carrier term(s)
music recording + CD audio
- Broad content term + Broad carrier + Specific carrier term(s)
data + digital + Excel file
- Broad content term + Broad carrier + Specific carrier term(s)
textual + tactile + book
+ Braille grade 2

3. Selection of Terms

3.1 Intelligibility

The working group agrees with the JSC that all terms should be intelligible to catalogue users. We confirmed that most of the recommended terms appear in general vocabulary dictionaries. Several terms have either an academic flavor or a specialized meaning within the RDA context.

3.2 Formulation of Broad Content-Carrier Terms

The working group discussions emphasized the boundaries between the broad categories in an effort to make them mutually exclusive. We considered variant terms for several categories (e.g., the ‘textual’ category might also be called ‘text,’ ‘words,’ ‘speech,’ or ‘verbal’). Constituency comments will be helpful in determining the final category names. Single-word terms are proposed in most cases so that system implementers can tailor the display of terms to local needs by deciding whether to display the literal term or a variation that would be more familiar. For example, the content type term ‘cartographic’ might be represented by an icon for a map, or by written words such as ‘cartographic resource,’ ‘cartographic material,’ or ‘maps.’ Working group members had different opinions about the need for the broad content-carrier terms to appear as verbal elements in the body of the description. Some members were comfortable with storing broad content-carrier terms as coded data that could be displayed as words to end users or exported as full terms when exchanging records between different information systems.

3.3 Content Terms *(See also issue 6.1: renaming the content element.)*

Thirteen ‘broad content’ terms are recommended. All eleven content-based GMDs proposed in AACR3 are included, although the term names may differ (e.g., ‘visual’ instead of ‘graphic’). We are also suggesting a change in scope for a few categories (e.g., ‘data’ includes more than electronic resources). The working group experimented with separate lists of work and expression terms, but the distinctions seemed too complex for practical applications. Instead, common work and expression combinations are represented directly by such terms as: music notation, music recording, and spoken word. Specific content terms, such as fiction, oral history, and cartoons, are not being proposed. Such terms could continue to be conveyed through genre/form access points and scope notes. The working group tested multiple levels of broad and narrow content terms, but the result seemed repetitive of existing access points.

3.4 Carrier Terms *(See also issues 6.2, 6.3, and 6.4)*

Both broad and specific carrier terms are recommended to help end users find as well as recognize the types of media that suit their circumstances. Ten ‘broad carrier’ terms are proposed. For the most part, the ‘broad carrier’ terms are the media-based GMDs from AACR3 and AACR2, primarily useful to filter searches. Several ‘broad carrier’ terms might seem redundant because they are usually paired with the same content terms (e.g., ‘object’ and ‘three-dimensional’). But we found enough examples of different pairings (e.g., ‘cartographic’ and ‘three-dimensional’ for globes) to recommend ‘broad carrier’ categories for all resources.

Numerous ‘specific carrier’ terms, including the AACR2 SMDs, are also proposed for the carrier element, because of their traditional value as terms closely associated with the statement of extent. Appendix B offers a starter list of specific media types that RDA might include for ready reference. Several kinds of ‘specific carrier’ terms are useful in more than one broad category, as noted in Appendix B. For example, ‘book’ can be used with both the ‘printed’ and ‘microform’ categories.

Some cataloguing communities have developed short, closed lists of ‘specific carrier’ (SMD) terms, and RDA should retain that functionality. But overall, the ‘specific carrier’ term list is not exhaustive. When the vocabulary for a category such as three-dimensional materials is too large to fold into RDA, users should be referred to standard authority files or thesauruses to select other terms as needed (e.g., AAT, LCSH). An open list is also recommended because although many ‘specific carrier’/media terms (book, photograph,

score) are well established, many new carriers are being developed. RDA would require constant revision to maintain comprehensive and up-to-date lists. It would be more appropriate to give guidance on the type of terms to be used and provide a number of examples within each 'broad carrier' category. Guidance should include the reasoning for specificity because of carrier access requirements (VHS and Betamax) and special user needs (large print, Braille grade 2).

4. Use of Multiple Terms *(See also issue 6.5)*

In some situations more than one term may be necessary to account for distinct characteristics or diverse parts of a resource. Several terms may be valuable to provide vocabulary that is (1) sufficiently specific to help end users find (locate), identify, and select resources and (2) sufficiently general to help end users find resources through tools that categorize, filter, and collocate initial searches and search results. The working group recommends repeating the content and carrier elements to convey key aspects of a resource through separate terms and ensure flexibility in display options. More work is needed to understand how to indicate different levels of terms and how to pair 'specific carrier' terms in sequences that yield logical displays.

4.1 Levels and Specificity of Terms

While it is acknowledged that cataloguing agencies will ultimately decide the appropriate level of specificity, cataloguers should be encouraged to use their judgment as to the number of content and carrier terms.

Decisions should be taken bearing in mind:

- the ease with which these elements can be determined
- the likelihood that these terms will be individually indexed and whether the entered term would be useful to correctly identify the resource.

In the majority of cases three levels, or less, of specificity should be adequate to describe the resource. Best practice should be to assign a term that is of most value to the potential user. It is more appropriate to specify the electronic file type, than to use the more generic word 'file', as there are implications for the user in accessing the content of the file. In the case of books, it would be important to distinguish between a standard print book and a large print book.

When the most 'specific carrier' type is a term that could be unfamiliar to many users, repeating the element to offer a 'general' carrier type could be helpful. The way the terms are displayed should indicate the relationship of the terms, from broad to specific. For example:

[content]	visual
[broad carrier]	graphic
[specific carrier]	photograph
[more specific carrier]	daguerreotype

4.2 Mixed Content Terms

In general, content terms represent mutually exclusive categories, focusing on the primary aspect of the resource, exclusive of accompanying material. As a matter of local library or cataloging community policy, however, broad content terms could be repeated for resources that offer distinct content types rather than using the 'mixed' content category.

For example, a read-along book and audio CD packaged together could be represented as either 'mixed' content, or with repeating elements:

[content]	textual	[content]	spoken word
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[broad carrier]	printed	and	[broad carrier]	audio
[specific carrier]	book		[specific carrier]	CD audio

Another situation that may require multiple content terms involves technologies that contain various contents in a single carrier. For example, dual discs often have audio CDs on one side and video DVDs on the other side. In such cases, it may be more appropriate to provide multiple content terms. Implementations would need to ensure that content data is held in a repeatable field.

[content] sound
 [content] moving image
 [carrier] dual disc

4.3 Reproductions

Multiple terms can also help represent resources created in one media and reproduced in another.

Example: a microfilmed book

textual
 microform
 book
 microfilm reel

Example: a digitized movie

moving image
 digital
 MPEG file

5. Display Considerations

Full record and citation displays should usually include both content and carrier information. How display is achieved is however primarily an implementation issue. In the earlier parts of this report, examples have been given of content and carrier terms required for particular circumstances. The layout and punctuation has not been intended to be prescriptive but illustrative.

Cataloguing agencies may be constrained by existing display options, but could explore more innovative display generation methods for existing systems and new systems. For example, icons, style sheets, or lists of selected fields to be displayed can be employed. This already happens in the case of initial listings of records found in response to a search. At this point the user requires a small sub-set of information; in our view this should include some content/carrier information.

With full record display it is generally an all or nothing approach, except that occasionally some fields (e.g. local notes fields on actions such as binding) are not visible on public interfaces. There could be more use of different levels of record display, allowing the user to move from citation, to basic details, to full records.

Encoding schemes such as MARC 21 and Onix can already be utilized to generate some content/carrier information in display by using the coded fields. For example the Revealweb Union Database of Accessible Materials in the UK is using the MARC 007 coding to generate 'specific carrier' terms for display, although the 007 coding has had to be extended to achieve this. For example:

007: fb#ab	displays as:	'Braille grade 2'
007: te	displays as:	'large print, point 20'
007: ff## f	displays as:	'tactile map, audio labels'

The following display examples are intended to illustrate the utility of content/carrier information and indicate that broad and specific terms can be incorporated in different types of displays.

5.1 Citation Display

Content/carrier information might be presented after author and title data but before imprint data, or alternatively after author, title and imprint data. For example:

Austen, J. / Pride and prejudice [spoken word : DAISY file] RNIB, 2005
Austen, J. / Pride and prejudice. RNIB, 2005 (spoken word : DAISY file)

The following examples illustrate different options for combining content and carrier terms, including non-display of 'broad content' or 'specific carrier' terms in some cases.

Prokofiev, S. / Romeo and Juliet. Decca, 1998	[music recording : CD audio]
Shakespeare, W. / Twelfth Night. Macmillan, 1971.	[textual : book]
Shakespeare, W. / Twelfth Night. Hasselman, 1883.	[textual : microfilm reel]
Detailed road map of Guernsey. RNIB, 1999.	[tactile map]
Chopin, F. / Nocturne in E flat major, op., no. 2. Paxton & Co., 1929.	[sheet music]
Wikipedia. Wikipedia Foundation, 2001-	[website]
The Canadian Players presenting Shakespeare's As You Like It. 1958.	[spoken word : audio tape reel]
As You Like It / designed by Hatch & Co., N.Y., c1869.	[visual: lithograph]
As You Like It /director, producer & editor, Christine Edzard. 1992.	[moving image : video VHS]
Statues of civil rights leaders. 2005.	[object : sculpture]

5.2 Brief and Full Record Displays for End Users

Records created with ISBD punctuation are shown below in representative OPAC displays to illustrate the viability of including broad content and specific carrier elements. Other element positions and display designs are possible.

Book

Shakespeare, William, 1564-1616.

As you like it / edited by Alan Brissenden. – Oxford [England] ; New York : Oxford University Press, 1994.

Textual

Book
x, 245 p. : ill. ; 20 cm.

Lithographic print

Hatch Lithographic Company.
As you like it / Hatch & Co., N.Y. – [New York] : c1869.
Visual
Print
1 print : lithograph, col. ; 50 x 40 cm.

Map

Hibbart, W.
An accurate plan of the city of Bath / W. Hibbart. 1780.
Cartographic
Map
1 map ; 22.5 x 17 cm.

Movie

As you like it / by William Shakespeare ; presented by the British Broadcasting Corporation ; producer, Cedric Messina ; director, Basil Coleman.
New York, N.Y. : Ambrose Video Pub., [2000?]
Moving image
Videodisc
1 videodisc (150 min.) : sd., col. ; 4 3/4 in.

Score

Walton, W.
As you like it : a poem for orchestra after Shakespeare / by William Walton ; arranged from the film score by Christopher Palmer.
Oxford : Oxford University Press, Music Department, 1991.
Music notation
Score
1 score (59 p.) ; 30 cm.

Sound recording

The Canadian Players presenting Shakespeare's As you like it in the Coolidge Auditorium, Nov. 18, 1958. – 1958.
Spoken word
Audio tape
2 reels : analog, 7 1/2 ips ; 10 in.

Website

Colonial house.
[Alexandria, VA] : PBS, 2004-
Mixed
Website

5.3 Search Filter Parameters or Set Limits

Set Limit: **textual**

Retrieves all print and tactile versions of 'Twelfth night', but not any audio versions or recorded performances on DVD.

Set Limit: **textual + tactile**

Retrieves only tactile versions of 'Twelfth night'.

Set Limit: **music notation**

Retrieves scores of Beethoven Symphony no. 1

Set Limit: **music recording**

Retrieves recordings of Beethoven Symphony no. 1

6. Issues

6.1 Renaming the 'Content' Element

Consideration should be given to renaming the "Type and Form of Content" element to avoid confusion with 'content' in the sense of 'subject matter.' An element name such as "Type of Resource" could make the nature of the element distinctive. Some members of the working group observed that phrases such as 'communication vehicle,' 'method of communication,' or even the GMD definition "class of material" reflect the common theme among the terms more effectively than 'content' does.

6.2 Relationship Among the Carrier, Extent, and Other Technical Details Elements

The 'specific carrier' terms are in many ways equivalent to the SMDs in the AACR2 physical description area. What has emerged from discussion is that carrier terms are valuable pieces of data in their own right, and not simply as one attribute of physical description. Further consideration is needed to clarify the relationship among terms used in the 'specific carrier', extent, and other technical details elements.

Extent information provides additional data to assist end users in understanding a resource. This information is obviously linked to 'specific carrier' terms, but the carrier terms enable filtered searching or quick selection in citation displays (e.g. for users who need audio cassettes not CDs). Extent information is typically for display, although in early printed resources, information such as pagination can assist in distinguishing between variants.

Extent information is also best understood in relation to the carrier. It seems logical that displays (except citation displays) will present the 'specific carrier' term(s) and the extent information in close proximity. Some 'carrier' and even 'content' terms need to display with extent because that combination of quantity and type is familiar to end users through long practice (e.g. '1 map'). But the underlying data would come from separate information elements. Further exploration is needed to understand how to record and display 'specific carrier' terms effectively. Using a map as an example, options to consider might include:

Hibbart, W.

An accurate plan of the city of Bath / W. Hibbart. 1780

Cartographic

Map

1 map ; 22.5 x 17 cm

OR

Cartographic

1 **map** ; 22.5 x 17 cm

OR

Cartographic

Map

1 **sheet** [or **item**] ; 22.5 x 17 cm

6.3 Distinguishing Levels of Broad and Specific Carriers

Although RDA guidelines should remain separate from implementation issues, consideration should be given to offering both a broad and a specific carrier element (or some other technique) that helps separate the broad and specific levels of carrier terms in both cataloguer and public displays. Appendix B also has examples of very specific or 'second-level' carrier terms (e.g., VHS and daguerreotype). Guidance on recording multiple levels of 'specific carrier' terms might also be needed to ensure a legible sequence of terms in displays. (e.g., 'condensed score,' 'VHS video,' or 'photograph: daguerreotype').

6.4 Reviewing 'Specific Carrier' Vocabulary

The working group started a list of 'specific carrier' terms for Appendix B. More work is needed to assess the existing SMDs in light of the new content-carrier roles. Additional terms might be sought to serve a particular cataloguing community. Infrequently used terms might be dropped, if a reference to authority files and thesauruses is seen as sufficient. Some terms might be changed if repeating a word in the specific and broad carrier terms seems confusing. For example, the working group began some changes by dropping the word 'computer' from SMDs such as 'computer optical disk.' Other situations could be looked at, too, such as 'audio disc' + 'audio'; 'manuscript music' + 'manuscript'; and 'tactile map' + 'tactile.'

6.5 Multiple Terms in Single or Repeatable Elements

Concern exists that if each content/carrier term is not in its own information element, if recording practices are not consistent, then it will be hard to build effective indexes, filters, and displays. RDA does not need to solve implementation issues. But if RDA has a section with general advice on encoding data, it would be helpful to mention the pros and cons of repeating elements limited to single terms vs. using single elements with multiple terms.

Appendix A. Closed List of Broad Terms for ‘Content’

Thirteen broad terms are proposed for the “type and form of content” element, including the eleven content types suggested in the draft of AACR3, plus two additional terms that make the combination of sound with music and words explicit. The examples illustrate how broad content, broad carrier, and specific carrier designations relate to each other, but in no way reflect how RDA users would have to display the terms.

cartographic
choreographic
data
mixed
moving image
music notation
music recording
object
software
sound
spoken word
textual
visual

cartographic	Definition	A resource representing the whole or part of the earth or any celestial body at any scale. Examples include maps and plans of real and imaginary places; aeronautical, nautical, and celestial charts; atlases; globes; block diagrams; sections; aerial photographs with a cartographic purpose; bird’s-eye views (map views); data files; tactile maps, etc.
	Content-Carrier Examples	<p>cartographic – digital – GIS file cartographic – graphic – remote-sensing image</p> <p>cartographic – printed – atlas cartographic – tactile – map cartographic – three-dimensional – globe</p> <p><i>[digitized file showing a printed map on a CD-ROM]</i> cartographic – digital – map, CD-ROM</p> <p><i>[single content with multiple carriers: a map issued as a printed sheet and a CD]</i> cartographic – printed – map – digital – map, CD-ROM</p>
choreographic	Definition	A resource representing movement through the use of letters, numbers, symbols, lines and diagrams. Examples include notations for dance and stage actions.
	Content-Carrier Examples	<p>choreographic – printed – Benesh Movement notation score</p> <p>choreographic – digital – Labanotation score, CD-ROM <i>[multiple specific carriers]</i></p> <p>choreographic – manuscript – Labanotation score, manuscript <i>[multiple specific carriers]</i></p>

data	Definition	A resource consisting of factual information in a structured form, often manipulated by a computer. Examples include numeric or verbal data such as financial records, demographic statistics, and log tables as well as database and spreadsheet files for astronomical, biochemical, genetic (e.g. DNA), economic, and other kinds of information.
	Excludes	Cartographic data files [cartographic]
	Content-Carrier Examples	data – digital – Excel file data – manuscript – volume data – printed – book
mixed	Definition	A resource consisting of multiple content types, no one of which is identifiable as the predominant constituent of the resource. Examples include archival records containing a variety of resources, instructional kits, and news service websites with moving image, sound, and textual information.
	Excludes	Resources with accompanying material in a different format. Use the predominant content type. Optionally, resources with two content types of equal weight can be described by repeating the type-of-content element. Example: a book and a read-along CD packaged together could be textual – spoken word.
	Content-Carrier Examples	mixed – digital – CD-ROM mixed – digital – website mixed – multimedia – learning pack
moving image	Definition	A resource consisting of a series of visual representations that, when shown in succession, convey an impression of motion; ¹ with or without sound. Examples include movies; animations; television broadcasts and video programs; and recorded performances of ballets, concerts, and dramas. Also, paper print films and other non-projected moving image resources.
	Content-Carrier Examples	moving image – projected – VHS video moving image – projected – DVD video moving image – projected – video with audio description moving image – projected – film reel moving image – digital – MPEG file moving image – graphic – paper print
music notation	Definition	A resource representing a musical composition or set of compositions through notation; may include words. Also referred to as printed or manuscript music. Examples include scores and parts.
	Content-Carrier Examples	music notation – printed – score music notation – printed – volume [<i>a resource that is neither a score nor a part</i>] music notation – tactile – Braille- music notation – printed – score, large print [<i>multiple specific carriers</i>] music notation – printed – score, parts [<i>multiple specific carriers</i>] music notation – manuscript – close score, printout [<i>multiple specific carriers</i>] music notation – digital – score, PDF file [<i>multiple specific carriers</i>] music notation – digital – parts, Sibelius file [<i>multiple specific carriers</i>]

¹ From: Association of Moving Image Archivists Cataloging Committee, Standards Review Subcommittee, “Comments Regarding Still Image and Moving Image Proposals to DC Usage Board,” April 2, 2003.

music recording	Definition	A resource representing a musical composition or set of compositions through sound; may include words. Examples include concert performances and studio recordings.
	Content-Carrier examples	music recording – audio – audio cassette music recording – audio – vinyl LP music recording – audio – CD audio music recording – audio – DVD audio music recording – digital – MP3 file

object	Definition	A resource consisting of three-dimensional material, either natural or man-made. Also referred to as three-dimensional structures or realia. Examples include sculpture, models, jigsaw puzzles, toys, buildings, equipment, and other cultural objects as well as naturally occurring objects such as fossils and microscopic specimens on slides.
	Excludes	Cartographic globes, relief models, cross-section models [cartographic resources]
	Content-Carrier Examples	object – three-dimensional – fossil object – three-dimensional – sculpture object – three-dimensional – coins object – three-dimensional – flint arrowhead object – three-dimensional – jigsaw puzzle

software	Definition	A resource consisting of a set of instructions used directly or indirectly in a computer to bring about a specific result. Examples include operating and network systems; electronic programs and written lines of code; and fonts and printer drivers.
	Excludes	Files produced by software and containing data, textual, or other resources [data, sound, textual, visual, etc.]
	Content-Carrier Examples	software – digital – CD-ROM software – digital – file software – digital – program file

sound	Definition	A resource consisting of sounds made by animals, birds, naturally occurring noise sources or such sounds simulated by the human voice or digital media. Examples include recordings of bird song, animal calls, and sound effects.
	Excludes	Recorded music [music recording] Recorded human speech [spoken word]
	Content-Carrier Examples	sound – audio – audio cassette sound – audio – vinyl LP sound – audio – CD audio sound – audio – DVD audio sound – digital – MP3 file

spoken word	Definition	A resource representing the sound of the human voice talking. Examples include talking books, radio broadcasts, oral history recordings, and audio recordings of plays.
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	Content-Carrier examples	spoken word – audio – audio cassette spoken word – audio – vinyl LP spoken word – audio – CD audio spoken word – audio – DVD audio spoken word – digital – DAISY file spoken word – digital – MP3 file
textual	Definition	A resource that communicates in a primarily verbal language through written words, symbols and numbers intended for reading through, such as a narrative; may have illustrations and data. Examples include books, correspondence, illuminated manuscripts, databases of journals, and microfilmed newspapers.
	Content-Carrier Examples	<p>textual – digital – MS Word file textual – digital – Braille file textual – digital – CD-ROM textual – manuscript – typescript textual – microform – microfiche textual – printed – book</p> <p>textual – digital – ebook, CD-ROM [multiple specific carriers] textual – digital – website, online [multiple specific carriers] textual – microform – book, microfilm [multiple specific carriers] textual – printed – book, large print [multiple specific carriers] textual – tactile – book, Braille grade 1 [multiple specific carriers]</p>
visual	Definition	A resource that communicates through the sense of sight using techniques such as photography, technical drawing, or painting to portray a person, place or thing, or an abstract form; may include text. Examples include photographs, pictures, posters, postcards, watercolours, CAD designs, diagrams, and tactile versions of these resources. Also referred to as still image.
	Excludes	Maps, charts, aerial photographs [cartographic] Films and videos [moving image]
	Content-Carrier Examples	<p>visual – graphic – photograph visual – graphic – poster visual – graphic – postcard visual – graphic – diagram visual – graphic – painting visual – graphic – watercolour painting visual – graphic – technical drawing visual – tactile – diagram</p> <p>visual – graphic – hologram [for a hologram on sheet of film] visual – digital – hologram [for a digital holographic file]</p> <p>visual – digital – photograph, JPEG file [multiple specific carriers] visual – digital – technical drawing, CAD file [multiple specific carriers]</p>

Appendix B: Closed List of Broad and Specific Terms for ‘Type and Form of Carrier’

Ten ‘broad carrier’ terms are proposed.

audio
digital
graphic
manuscript
microform
multimedia
printed
projected
tactile
three-dimensional

Numerous ‘specific carrier’ terms are also listed as examples of terms that could be provided in RDA for ready reference to frequently used designations for common media types. The ‘specific carrier’ terms include the SMDs from AACR2 and selected product categories from Onix; many additional terms could be included. When the vocabulary for a category such as three-dimensional or visual materials is too large to list within RDA, a note reminds users to consult standard authority files or thesauruses for additional terms.

The carrier element is repeatable. Both broad and specific terms can be used to describe a single resource. For resources with carriers in different formats, more than one ‘specific carrier’ term can be selected from a single broad category. As noted in the table, the ‘specific carriers’ that appear under graphic and printed can also be used with ‘specific carriers’ in the digital, manuscript, microform, and tactile categories to clarify the media type or represent reproductions.

Audio	Definition	A medium containing a recording of sound vibrations for use with a playback device such as a turntable, audio cassette player, CD player. Includes digitally encoded as well as analog sound. Also referred to as a sound recording.
	Specific terms	audio cartridge audio cassette audio disc audio tape reel CD audio CD extra [<i>also called</i> Enhanced CD] DAT DVD audio MiniDisc paper roll SACD sound track film vinyl EP/LP wax cylinder wire recording

digital	Definition	An electronic file or group of files bearing various types of content for use through a computer or any other digital communication device. Also referred to as ‘electronic resources.’ Includes online and remote access resources as well as files on physical media.
	Exclusions	Digitally encoded sound produced for devices such as CD players [audio] Digitally encoded recordings of moving images for devices such as DVD players [projected]

	Specific terms	<p>Note: Terms from the graphic and printed categories can also be used with specific digital terms. Example: visual – digital – photograph – JPEG file</p> <p>CD-I CD-ROM chip cartridge computer game Nintendo Gameboy Xbox etc. disk diskette DVD DVD-R DVD+R DVD-RAM DVD-ROM DVD-RW DVD+RW ebook edoc file</p> <p> Specific generic or proprietary file names could include:</p> <p> ASCII file Braille file CAD file DAISY file GIF file GIS file HTML file JPEG file Mozart file MP3 file MPEG file MS Word file PDF file Powerpoint file program file Quicktime format Real audio Real video format Rich text format SGML file Sibelius file TIFF file XHTML file XML file WAV file Windows Media format etc.</p> <p>magnetic disc online optical disk tape cartridge tape cassette</p>
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		tape reel website
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graphic	Definition	A medium for image(s) produced through a visual process such as drawing, painting, photography, radiography, or engraving. Includes mixed media artworks such as collage and photographic slides used to make prints (not intended for projection). Includes two-dimensional media conveying the illusion of three-dimensions such as holograms and isometric projections.
	Specific terms	<p>Note: Consult published thesauruses or authority files for additional terms.</p> <p>activity card album art original art print art reproduction chart collage diagram drawing flash card flip chart hologram icon painting acrylic oil watercolour, etc. paper print [<i>for a moving image</i>] photograph daguerreotype negative photographic print, etc. photomechanical print picture portfolio postcard poster print etching lithograph woodcut, etc. profile radiograph remote-sensing image section sketchbook slide [<i>for non-projected mounted transparency; often used to make color prints</i>] stereograph study print technical drawing plan, etc. transparency view</p>

		wall chart
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manuscript	Definition	A-medium bearing a text, map, or musical score made by hand, typing, keying, or inscription on clay tablets, etc. Also, unpublished or personal use printouts from computer programs such as word processing or e-mail.
	Specific terms	Note: Terms from the graphic and printed categories can also be used as ‘specific carrier’ elements for manuscript. Example: cartographic – manuscript – map. item printout typescript volume

microform	Definition	A transparent or opaque medium bearing reduced-size images that require magnification to be read or viewed.
	Specific terms	Note: Terms from the graphic and printed categories can also be used with specific microform terms. Example: textual – microform – book , microfilm reel aperture card microfilm cartridge cassette reel slip microfiche fiche cassette microopaque

multimedia	Definition	A resource consisting of carriers belonging to two or more carrier categories; often made up of multiple parts. The components can be in any analog or digital media.
	Exclusion	Computer game [digital]
	Specific terms	Note: Consult published thesauruses or authority files for additional terms needed. board game kit learning pack

printed	Definition	A-medium in which text, music notation, or cartographic images produced through a printing or other mechanical process.
	Exclusions	Microform Projected
	Specific terms	atlas book broadside large print loose-leaf

		map pamphlet part piano [violin, etc.] conductor part photocopy score chorus score close score condensed score miniature score piano score vocal score sheet music volume
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projected	Definition	A medium for recording moving or still images that are viewed through display devices-such as television receivers, video tape players, slide projectors, or video DVD players.
	Specific terms	DVD video film cartridge film cassette film loop film reel film roll filmstrip NTSC overhead transparency PAL SECAM slide stereograph reel video with audio description videocartridge videocassette Betamax VHS videodisc videoreel

tactile	Definition	A medium bearing raised symbols or differently textured surfaces to represent text, music notation, cartographic images, or other content; intended for use by the visually impaired.
	Specific terms	Note: Terms from the graphic and printed categories can also be used with tactile terms. Example: music notation – tactile – score, Braille. Braille Braille and print Braille grade 1/2/3 Moon and print Moon grade 1/2/3

		tactile <i>[add Braille labels or audio labels as appropriate]</i>
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three-dimensional	Definition	A medium consisting of physical shapes meant to be viewed from multiple sides. Also known as 3D.
	Specific terms	<p>Note: Consult published thesauruses or authority files for terms as needed. Only some representative terms are listed here.</p> <p> botanical specimen ceramic vase clothing coins diorama doll exhibit flint arrowhead fossil game globe celestial moon terrestrial, etc. jigsaw puzzle medal microscope slide mock-up model raised relief map rock sculpture tool toy t-shirt </p>

Appendix C: Commercial Website Example Using Categories to Filter and Identify Products

Source: Amazon search for 'As You Like It' (10/30/05)

1. Broad category 'product type' terms guide the search navigation.

Refine your search: Find 'as you like it' in these categories:

[Books](#) (876)
[Classical Music](#) (46)
[Video](#) (7)
[Popular Music](#) (6)
[DVD](#) (3)
[Home & Garden](#) (2)
[Tools & Hardware](#) (1)
[Everything Else](#) (1)
[zShops](#) (371)

2. Categories terms also appear in 'citation displays'

[As You Like It](#) **DVD** ~ Sir Laurence Olivier

DVD: [See all 3 items](#)

Buy new: \$6.98 **Used & new** from \$3.70 Usually ships in 24 hours

[As You Like It \(Folger Shakespeare Library\)](#) by William Shakespeare **Paperback**

Books: [See all 876 items](#)

Buy new: \$5.99 **Used & new** from \$1.50 Usually ships in 24 hours

[Hymns Triumphant](#) ~ by Lee Holdridge, John Alldis, Malcolm Hicks **Audio CD**

Classical Music: [See all 46 items](#)

Buy new: \$10.99 **Used & new** from \$8.84 Usually ships in 24 hours

[As You Like It-Act II Scene VII](#) **-- Print**

Home & Garden: [See all 2 items](#)

Buy new: \$16.67 Usually ships in 2-3 business days

[William Shakespeare's 'As You Like It': A Study Guide from Gale's 'Shakespeare for Students' \(Volume 01, Chapter 1\) \[DOWNLOAD: PDF\]](#) **(Digital)**

Books: [See all 876 items](#)

Buy new: \$6.95 Available for download now

[As You Like It](#) **VHS**

Video: [See all 7 items](#)

Used & new from \$57.99 Usually ships within 1-2 business days.